

**FACT SHEET FOR STATE WASTE DISCHARGE PERMIT NO. ST 6025**

***nLight Photonics***

Issuance Date: May 25, 2001

## TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION .....	1
BACKGROUND INFORMATION .....	3
DESCRIPTION OF THE FACILITY .....	3
History .....	3
Industrial Processes.....	3
Treatment Processes .....	4
PERMIT STATUS .....	4
WASTEWATER CHARACTERIZATION .....	4
Parameter .....	4
SEPA COMPLIANCE .....	6
PROPOSED PERMIT LIMITATIONS.....	6
TECHNOLOGY-BASED EFFLUENT LIMITATIONS.....	6
EFFLUENT LIMITATIONS BASED ON LOCAL LIMITS .....	7
MONITORING REQUIREMENTS.....	9
OTHER PERMIT CONDITIONS .....	10
REPORTING AND RECORDKEEPING.....	10
OPERATIONS AND MAINTENANCE .....	10
PROHIBITED DISCHARGES .....	10
DILUTION PROHIBITED .....	10
CONTINGENCY, SPILL CONTROL AND EMERGENCY RESPONSE PLAN .....	10
GENERAL CONDITIONS .....	10
PUBLIC NOTIFICATION OF NONCOMPLIANCE.....	11
RECOMMENDATION FOR PERMIT ISSUANCE .....	11
REFERENCES FOR TEXT AND APPENDICES.....	11
Appendices.....	12
APPENDIX A—PUBLIC INVOLVEMENT INFORMATION.....	12
APPENDIX B—GLOSSARY.....	13
APPENDIX C—RESPONSE TO COMMENTS .....	17

## **INTRODUCTION**

This fact sheet is a companion document to the draft State Waste Discharge Permit No. ST-6025. The Department of Ecology (the Department) is proposing to issue this permit, which will allow discharge of wastewater to the Clark County/Salmon Creek publicly owned treatment works (the POTW) through the Hazel Dell Sewer District (HDSD) sewer collection system. This fact sheet explains the nature of the proposed discharge, the Department's decisions on limiting the pollutants in the wastewater, and the regulatory and technical bases for those decisions.

Washington State law (RCW 90.48.080 and 90.48.160) requires that a permit be issued before discharge of wastewater to waters of the state is allowed. This statute includes commercial or industrial discharges to sewerage systems operated by municipalities or public entities which discharge into public waters of the state. Regulations adopted by the state include procedures for issuing permits and establish requirements which are to be included in the permit (Chapter 173-216 WAC).

This fact sheet and draft permit are available for review by interested persons as described in Appendix A—Public Involvement Information.

The fact sheet and draft permit have been reviewed by the Permittee. Errors and omissions identified in these reviews have been corrected before going to public notice. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments will become part of the file on the permit and parties submitting comments will receive a copy of the Department's response. The fact sheet will not be revised. Changes to the permit will be addressed in Appendix C—Response to Comments.

<b>GENERAL INFORMATION</b>	
Applicant	Mark DeVito
Facility Name and Address	nLight Photonics Corporation (nLPC) 11012 NE 39th St. Ste. C7 Vancouver, WA 98682
Type of Facility	Semiconductors and Related Devices
Standard Industrial Classification (SIC) Code	3674
Facility Discharge Location	<p>This facility discharges to the Clark County/Salmon Creek publicly owned treatment works (the POTW).</p> <p>nLPC is connected to the sewage collection system of the POTW. The sewage collection system is under the jurisdiction of, and operated by, the Hazel Dell Sewer District (HDSD). The POTW is operated by Clark County. The sewer connection for nLPC is located at:</p> <p>Latitude: 45° 41' 17.45" N Longitude: 122° 36' 50.05" W</p> <p>The POTW is located in the southwest corner of the state of Washington, just north of Vancouver. The POTW is an activated sludge plant. The final effluent is discharged to the Columbia River in accordance with National Pollutant Discharge Elimination System (NPDES) Permit No. WA0023639. The discharge location for the final effluent is at:</p>

*FACT SHEET FOR STATE WASTE DISCHARGE PERMIT NO. ST 6025*  
*nLight Photonics*

GENERAL INFORMATION	
	Latitude: 45° 44' 27" N Longitude: 122° 45' 25" W
Treatment Plant Receiving Discharge	Salmon Creek Wastewater Treatment Plant through Hazel Dell Sewer District
Contact at Facility	Name: Jeff Shapiro Telephone #: (503) 969-4127
Responsible Official	Name: Jeff Shapiro Title: Director of Facilities Address: 11012 NE 39 <sup>th</sup> Street, Suite C-7, Vancouver, WA 98682 Telephone #: (360) 256-2923, Ext. 304 FAX # (360) 256-7252

## **BACKGROUND INFORMATION**

### *DESCRIPTION OF THE FACILITY*

nLight Photonics Corporation (nLPC) is building a laser diode fab in Vancouver, Washington. The facility is classified as a significant industrial user (SIU) because it is a categorical industrial user subject to federal categorical pretreatment standards. Processes found in the facility are classified under the 40 CFR Part 469—Electrical and Electronic Components Point Source Category, Subpart A—Semiconductor Subcategory and Subpart B—Electronic Crystals Subcategory.

### HISTORY

nLight Photonics is a proposed facility. The nLPC plans to start operation on June 1, 2001.

### INDUSTRIAL PROCESSES

#### Metal Organic Vapor Deposition (MOCVD):

- Deposition of various metals like arsenic, phosphorous, aluminum and silicon
- Quartz tube cleaning
- Scanning with electron microscope
- Metal layer inspection
- Acid/Base clean and etch

#### Photolithography:

- Photo masking and developing of imagines onto the metal layers listed above
- Acid/Base clean and etch

#### Wafer Metallization:

- Deposition of various metals like gold, germanium and palladium by E-beam evaporation method
- Acid/Base clean and etch

#### Wafer Polishing:

- Polishing surface of wafer
- Back grinding excess wafer to reduce the thickness of the wafer
- Acid/Base clean and etch

#### Facet Coating:

- Cleaving laser bars from wafer
- E-beam evaporation of aluminum and silicon on the edges of the bars
- Acid/Base clean and etch

#### Submount Preparation:

- Preparation of lasers into packaging assemble
- Solvent clean

#### Test:

- Testing for reliability of laser

#### Submount Assembly and Packaging

- Placement of the final submount and laser into the final laser diode package

*FACT SHEET FOR STATE WASTE DISCHARGE PERMIT NO. ST 6025*  
*nLight Photonics*

**TREATMENT PROCESSES**

There are four treatment processes proposed for the facility:

1. Acid Waste Neutralization (AWN)
2. Hydrofluoric (HF) acid Wastewater Treatment
3. Arsenic Wastewater Treatment
4. Back Grind Wastewater Treatment

Those processes are described in the engineering report and the application submitted to the Department on January 12, 2001. The engineering report can not be approved because it was not prepared according to WAC 173-240-130 but rather according to WAC 130-240-060. However, the report is treated as a part of an application package and used to write a permit.

*PERMIT STATUS*

This is a new facility. An application for a permit was submitted to the Department on January 12, 2001, and accepted by the Department on January 18, 2001.

*WASTEWATER CHARACTERIZATION*

The concentration of pollutants in the discharge was reported in the permit application. The proposed wastewater discharge is characterized for the following parameters:

PARAMETER	Concentrations Measured			Analytical Method Std. Methods 19 <sup>th</sup> Edition	Detection Limit
	Minimum	Maximum	Average		
BOD (5 day)	2.0	10.0	5-6	5210	2 mg/L
COD	5.0	15.0	10.0	5220 B, C, or D	5 mg/L
Total Suspended Solids	1.0	50.0	25.0	2540D	1 mg/L
Total Dissolved Solids	10.0	50	25.0	2540C	
Conductivity				2510B	
Ammonia-N	20.0	30.0	25.0	4500-NH <sub>3</sub> C	20 µg/L
pH	7.0	9.5	7-9	4500-H	0.1 units
Total Residual Chlorine				4500-C1 E	1 mg/L
Fecal Coliform				9222 D	
Total Coliform				9221 B or 9222 B	
Dissolved Oxygen				4500-O C or 4500-O G	

*FACT SHEET FOR STATE WASTE DISCHARGE PERMIT NO. ST 6025*  
*nLight Photonics*

PARAMETER	Concentrations Measured			Analytical Method Std. Methods 19 <sup>th</sup> Edition	Detection Limit
	Minimum	Maximum	Average		
Nitrate + Nitrite-N	0.5	2.0	1.5	4500-NO <sub>3</sub> E	0.5 mg/L
Total Kjeldahl N	20.0	35.0	30.0	4500-N <sub>org</sub>	20 µg/L
Ortho-phosphate-P	N/D	N/D	N/D	4500-P E or 4500-P F	1 µg/L
Total-phosphate-P	30.0	50.0	40.0	4500-P B.4.	1µg/L
Total Oil & Grease	N/D	N/D	N/D	5520 C	0.2 mg/L
Total Petroleum Hydrocarbon	N/D	N/D	N/D	5520 D, F	
Calcium	0	60.0	30.0	3500-Ca B	3 µg/L
Chloride	0	10.0	5.0	4500-Cl C	0.15 µg/L
Fluoride	0	50.0	10.0	4500-F D	0.1 mg/L
Magnesium	0	BG <sup>1</sup>		3500-Mg B	0.5 µg/L
Potassium	0	BG		3500-K B	5 µg/L
Sodium	0	BG		3500-Na B	2 µg/L
Sulfate	0	BG		4500-SO <sub>4</sub> E	1 mg/L
Arsenic (total)	0	0.1 ppm	0.05 ppm	3114 B	2 µg/L
Barium (total)	0	BG		3500-Ba B	30 µg/L
Cadmium (total)	0	BG		3500-Cd B	5 µg/L
Chromium (total)	0	BG		3500-Cr B	50 µg/L
Copper (total)	0	BG		3500-Cu B	20 µg/L
Lead (total)	0	BG		3500-Pb B	100 µg/L
Mercury	0	BG		3500-Hg B	0.2 µg/L
Molybdenum (total)	0	BG		3500-Mo	1 µg/L
Nickel (total)	0	BG		3500-Ni	20 µb/L

<sup>1</sup> Background level of municipal water

PARAMETER	Concentrations Measured			Analytical Method Std. Methods 19 <sup>th</sup> Edition	Detection Limit
	Minimum	Maximum	Average		
Selenium (total)	0	BG		3500-Se C	2 µg/L
Silver (total)	0	BG		3500-Ag B	10 µg/L
Zinc (total)	0	BG		3500-Zn B	5 µg/L

#### SEPA COMPLIANCE

SEPA application was submitted on December 15, 2000.

#### PROPOSED PERMIT LIMITATIONS

State regulations require that limitations set forth in a waste discharge permit must be based on the technology available to treat the pollutants (technology-based) or be based on the effects of the pollutants to the POTW (local limits). Wastewater must be treated using all known, available, and reasonable treatment (AKART) and not interfere with the operation of the POTW.

The more stringent of the local limits-based or technology-based limits are applied to each of the parameters of concern. Each of these types of limits is described in more detail below.

#### TECHNOLOGY-BASED EFFLUENT LIMITATIONS

All waste discharge permits issued by the Department must specify conditions requiring available and reasonable methods of prevention, control, and treatment of discharges to waters of the state (WAC 173-216-110). Existing federal categorical limitations for this facility are found under 40 CFR Part 469—Electrical and Electronic Components Point Source Category, Subpart A—Semiconductor Subcategory and Subpart B—Electronic Crystals Subcategory. The following limitations are necessary to satisfy the requirement for AKART:

Pollutant of pollutant property	Maximum for any 1 day	Average of daily values for 30 consecutive days
	milligrams per liter (mg/L)	
Total toxic organics (TTO)	1.37	
Arsenic	2.09	0.83
Fluoride	32.0	17.4
Total suspended solids (TSS)	61.0	23.0
pH	Within the range of 6.0-9.0 (standard units)	

TTO is defined for this industry (40 CFR 469.22) as the sum of the concentrations for each of the following toxic organic compounds which is found in the discharge at a concentration greater than ten (10) micrograms per liter (µg/l):



*FACT SHEET FOR STATE WASTE DISCHARGE PERMIT NO. ST 6025*  
*nLight Photonics*

chloroform	ethylbenzene
phenol	pentachlorophenol
carbon tetrachloride	2,4,6 trichlorophenol
dichlorobromomethane	anthracene
1,2 dichloroethane	bis (2-ethylhexyl) phthalate
1,1 dichloroethylene	butyl benzyl phthalate
methylene chloride	1,2 dichlorobenzene
tetrachloroethylene	1,3 dichlorobenzene
toluene	1,4 dichlorobenzene
1,1,1 trichloroethane	1,2 diphenylhydrazine
1,1,2 trichloroethane	di-n-butyl phthalate
trichloroethylene	isophorone
2 chlorophenol	naphthalene
2,4 dichlorophenol	1,2,4 trichlorobenzene
2 nitrophenol	4 nitrophenol

Under 40 CFR 469.13 and 40 CFR 469.23, a certification of proper solvent management may be submitted in lieu of monitoring if the facility has an approved solvent management plan. In order to secure this exemption from regular monthly monitoring for TTO, nLight Photonics must make the request in writing and submit a solvent management plan. nLight Photonics will be required to complete quarterly sampling for TTO for one year before the exemption from regular monitoring will be allowed. The Department must approve the solvent management plan in order for the monitoring exemption to go into effect. After approval of the solvent management plan, the Department may allow nLight Photonics to make the following certification as a comment to the monthly discharge monitoring report (DMR):

"Based on my inquiry of the person or persons directly responsible for managing compliance with the pretreatment standard for TTO, I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewater has occurred since filing the last discharge monitoring report. I further certify that this facility is implementing the solvent management plan submitted to Ecology."

*EFFLUENT LIMITATIONS BASED ON LOCAL LIMITS*

In order to protect Salmon Creek Wastewater Treatment Plant from pass-through, interference, concentrations of toxic chemicals that would impair beneficial or designated uses of sludge, or potentially hazardous exposure levels, limitations for certain parameters are necessary. These limitations are based on local limits established by Hazel Dell Sewer District and codified in ordinance. Applicable limits for this discharge include the following:

*FACT SHEET FOR STATE WASTE DISCHARGE PERMIT NO. ST 6025*  
*nLight Photonics*

<b>Parameter</b>	<b>Units</b>	<b>Limits</b>
pH	standard units	6.0-9.0
Total Suspended Solids (TSS)	mg/L	300
5-day Biochemical Oxygen Demand (BOD <sub>5</sub> )	mg/L	240
Arsenic	milligrams per liter (mg/L)	0.1
Barium	mg/L	5.5
Beryllium	mg/L	90
Cadmium	mg/L	0.3
Chlorine Demand	mg/L	20
Chromium	mg/L	1.7
Copper	mg/L	2.2
Cyanide	mg/L	0.2
Iron	mg/L	10
Lead	mg/L	0.4
Mercury	mg/L	0.05
Nickel	mg/L	2.1
Selenium	mg/L	0.1
Silver	mg/L	0.1
Zinc	mg/L	2.3
Phenols or Cresols	mg/L	0.6
Oil and grease (total of petroleum and vegetable based)	mg/L	50

The Hazel Dell Sewer District may enter into special agreements with user with BOD<sub>5</sub> above 240 mg/l and TSS above 300 mg/l. For this reason the permit won't limit BOD<sub>5</sub> and TSS.

Pollutant concentrations in the proposed discharge with technology-based controls in place will not cause problems at the receiving POTW such as interference, pass-through or hazardous exposure to POTW workers nor will it result in unacceptable pollutant levels in the POTW's sludge.

### Sludge Disposal

The sludge outfall from dissolved arsenic wastewater treatment will be classified as a non-RCRA waste and land filled. The majority of the gallium arsenide debris from back grind will be collected via a centrifuge and recycled. The remaining arsenic slurry will be collected into a 35-gallon drum, heat-dried and sent for encapsulation or incineration. Finally, the hydrofluoric waste (calcium fluoride) will be sent to a cement manufacturer for reuse. Solvent and corrosive trash will be incinerated.

### **MONITORING REQUIREMENTS**

Monitoring, recording, and reporting are specified to verify that the treatment process is functioning correctly, and that effluent limitations are being achieved (WAC 173-216-110).

The following are monitoring locations:

<b>Outfalls:</b>	<b>Effluent from</b>
001	Acid Waste Neutralization (AWN)
002	Hydrofluoric (HF) acid Wastewater Treatment
003	Arsenic Wastewater Treatment
004	Back Grind Wastewater Treatment
005	All Industrial Processes (Monitored Manhole)

The monitoring schedule is detailed in the proposed permit under Condition S2. Specified monitoring frequencies take into account the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring.

Monitoring for the following parameters is being required to further characterize the effluent:

- Barium
- Beryllium
- Cadmium
- Chlorine Demand
- Chromium
- Copper
- Cyanide
- Iron
- Lead
- Mercury
- Nickel
- Selenium
- Silver
- Zinc

*FACT SHEET FOR STATE WASTE DISCHARGE PERMIT NO. ST 6025*  
*nLight Photonics*

These pollutant(s) could have a significant impact on the receiving POTW and they were not characterized in the application.

**OTHER PERMIT CONDITIONS**

*REPORTING AND RECORDKEEPING*

The conditions of S3 are based on the authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges (WAC 273-216-110 and 40 CFR 403.12 (e),(g), and (h)).

*OPERATIONS AND MAINTENANCE*

The proposed permit contains condition S.5. as authorized under Chapter 173-240-150 WAC and Chapter 173-216-110 WAC. It is included to ensure proper operation and regular maintenance of equipment, and to ensure that adequate safeguards are taken so that constructed facilities are used to their optimum potential in terms of pollutant capture and treatment.

*PROHIBITED DISCHARGES*

Certain pollutants are prohibited from being discharged to the POTW. These include substances which cause pass-through or interference, pollutants which may cause damage to the POTW or harm to the POTW workers (Chapter 173-216 WAC) and the discharge of designated dangerous wastes not authorized by this permit (Chapter 173-303 WAC).

*DILUTION PROHIBITED*

The Permittee is prohibited from diluting its effluent as a partial or complete substitute for adequate treatment to achieve compliance with permit limitations.

*CONTINGENCY, SPILL CONTROL AND EMERGENCY RESPONSE PLAN*

The Department has determined that the Permittee stores a quantity of chemicals that have the potential to cause water pollution if accidentally released. The Department has the authority to require the Permittee to develop best management plans to prevent this accidental release under section 402(a)(1) of the Federal Water Pollution Control Act (FWPCA) and RCW 90.48.080.

The Permittee has developed a plan for preventing the accidental release of pollutants to state waters and for minimizing damages if such a spill occurs. The plan was submitted to the Department with the application package on January 12, 2001.

*GENERAL CONDITIONS*

General Conditions are based directly on state laws and regulations and have been standardized for all industrial waste discharge to POTW permits issued by the Department.

Condition G1 requires responsible officials or their designated representatives to sign submittals to the Department. Condition G2 requires the Permittee to allow the Department to access the treatment system, production facility, and records related to the permit. Condition G3 specifies conditions for modifying, suspending or terminating the permit. Condition G4 requires the Permittee to apply to the Department prior to increasing or varying the discharge from the levels stated in the permit application. Condition G5 requires the Permittee to construct, modify, and operate the permitted facility in accordance with approved engineering documents. Condition G6 prohibits the Permittee from using the permit as a basis

for violating any laws, statutes or regulations. Conditions G7 and G8 relate to permit renewal and transfer. Condition G9 requires the Permittee to control production or wastewater discharge in order to maintain compliance with the permit. Condition G10 prohibits the reintroduction of removed pollutants into the effluent stream for discharge. Condition G11 requires the payment of permit fees. Condition G12 describes the penalties for violating permit conditions.

#### **PUBLIC NOTIFICATION OF NONCOMPLIANCE**

A list of all industrial users which were in significant noncompliance with Pretreatment Standards or Requirements during any of the previous four quarters may be annually published by the Department in a local newspaper. Accordingly, the Permittee is apprised that noncompliance with this permit may result in publication of the noncompliance.

#### **RECOMMENDATION FOR PERMIT ISSUANCE**

This proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to control toxics. The Department proposes that the permit be issued for two years.

#### **REFERENCES FOR TEXT AND APPENDICES**

## **APPENDICES**

### *APPENDIX A—PUBLIC INVOLVEMENT INFORMATION*

The Department has tentatively determined to reissue a permit to the applicant listed on page 1 of this fact sheet. The permit contains conditions and effluent limitations which are described in the rest of this fact sheet.

Public notice of application was published on February 2, 2000, and February 9, 2000, in *The Columbian* to inform the public that an application had been submitted and to invite comment on the reissuance of this permit.

The Department will publish a Public Notice of Draft (PNOD) on March 30, 2001, in *The Columbian* to inform the public that a draft permit and fact sheet are available for review. Interested persons are invited to submit written comments regarding the draft permit. The draft permit, fact sheet, and related documents are available for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at the regional office listed below. Written comments should be mailed to:

Water Quality Permit Coordinator  
Department of Ecology  
Southwest Regional Office  
PO Box 47775

Olympia, WA 98504-7775 Any interested party may comment on the draft permit or request a public hearing on this draft permit within the thirty (30) day comment period to the address above. The request for a hearing shall indicate the interest of the party and reasons why the hearing is warranted. The Department will hold a hearing if it determines there is a significant public interest in the draft permit (WAC 173-216-100). Public notice regarding any hearing will be circulated at least thirty (30) days in advance of the hearing. People expressing an interest in this permit will be mailed an individual notice of hearing.

Comments should reference specific text followed by proposed modification or concern when possible. Comments may address technical issues, accuracy and completeness of information, the scope of the facility's proposed coverage, adequacy of environmental protection, permit conditions, or any other concern that would result from issuance of this permit.

The Department will consider all comments received within thirty (30) days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the permit. The Department's response to all significant comments is available upon request and will be mailed directly to people expressing an interest in this permit.

Further information may be obtained from the Department by telephone, (360) 407-6280, or by writing to the address listed above.

This permit was written by Jacek Anuszewski, P.E.

## APPENDIX B—GLOSSARY

**Ammonia**—Ammonia is produced by the breakdown of nitrogenous materials in wastewater. Ammonia is toxic to aquatic organisms, exerts an oxygen demand, and contributes to eutrophication. It also increases the amount of chlorine needed to disinfect wastewater.

**Average Monthly Discharge Limitation**—The average of the measured values obtained over a calendar month's time.

**Best Management Practices (BMPs)**--Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the State. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

**BOD<sub>5</sub>**--Determining the Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The BOD<sub>5</sub> is used in modeling to measure the reduction of dissolved oxygen in a receiving water after effluent is discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD is not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act.

**Bypass**—The intentional diversion of waste streams from any portion of the collection or treatment facility.

**Categorical Pretreatment Standards**—National pretreatment standards specifying quantities or concentrations of pollutants or pollutant properties which may be discharged to a POTW by existing or new industrial users in specific industrial subcategories.

**Compliance Inspection - Without Sampling**--A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.

**Compliance Inspection - With Sampling**--A site visit to accomplish the purpose of a Compliance Inspection - Without Sampling and as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the 85 percent removal requirement. Additional sampling may be conducted.

**Composite Sample**—A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite"(collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots.

**Construction Activity**—Clearing, grading, excavation and any other activity which disturbs the surface of the land. Such activities may include road building, construction of residential houses, office buildings, or industrial buildings, and demolition activity.

**Continuous Monitoring** --Uninterrupted, unless otherwise noted in the permit.

**Engineering Report**—A document, signed by a professional licensed engineer, which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater

facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.

**Grab Sample**—A single sample or measurement taken at a specific time or over as short period of time as is feasible.

**Industrial User**—A discharger of wastewater to the sanitary sewer which is not sanitary wastewater or is not equivalent to sanitary wastewater in character.

**Industrial Wastewater**—Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and, also, leachate from solid waste facilities.

**Interference**— A discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal and;

Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to subtitle D of the SWDA), sludge regulations appearing in 40 CFR Part 507, the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

**Local Limits**—Specific prohibitions or limits on pollutants or pollutant parameters developed by a POTW.

**Maximum Daily Discharge Limitation**—The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is calculated as the average measurement of the pollutant over the day.

**Method Detection Level (MDL)**--The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is above zero and is determined from analysis of a sample in a given matrix containing the analyte.

**Pass-through**— A discharge which exits the POTW into waters of the—State in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation), or which is a cause of a violation of State water quality standards.

**pH**—The pH of a liquid measures its acidity or alkalinity. A pH of 7 is defined as neutral, and large variations above or below this value are considered harmful to most aquatic life.

**Potential Significant Industrial User**--A potential significant industrial user is defined as an Industrial User which does not meet the criteria for a Significant Industrial User, but which discharges wastewater meeting one or more of the following criteria:



- a. Exceeds 0.5 % of treatment plant design capacity criteria and discharges <25,000 gallons per day or;
- b. Is a member of a group of similar industrial users which, taken together, have the potential to cause pass through or interference at the POTW (e.g. facilities which develop photographic film or paper, and car washes).

The Department may determine that a discharger initially classified as a potential significant industrial user should be managed as a significant industrial user.

**Quantitation Level (QL)**-- A calculated value five times the MDL (method detection level).

**Significant Industrial User (SIU)**--

- 1) All industrial users subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N and;
- 2) Any other industrial user that: discharges an average of 25,000 gallons per day or more of process wastewater to the POTW (excluding sanitary, noncontact cooling, and boiler blow-down wastewater); contributes a process wastestream that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or is designated as such by the Control Authority\* on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement (in accordance with 40 CFR 403.8(f)(6)).

Upon finding that the industrial user meeting the criteria in paragraph 2, above, has no reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement, the Control Authority\* may at any time, on its own initiative or in response to a petition received from an industrial user or POTW, and in accordance with 40 CFR 403.8(f)(6), determine that such industrial user is not a significant industrial user.

\*The term "Control Authority" refers to the Washington State Department of Ecology in the case of non-delegated POTWs or to the POTW in the case of delegated POTWs.

**Slug Discharge**—Any discharge of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch discharge to the POTW. This may include any pollutant released at a flow rate which may cause interference with the POTW.

**State Waters**—Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

**Stormwater**—That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a storm water drainage system into a defined surface water body, or a constructed infiltration facility.

**Technology-based Effluent Limit**—A permit limit that is based on the ability of a treatment method to reduce the pollutant.

**Total Coliform Bacteria**—A microbiological test which detects and enumerates the total coliform group of bacteria in water samples.

**Total Dissolved Solids**—That portion of total solids in water or wastewater that passes through a specific filter.

**Total Suspended Solids (TSS)**--Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic

effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

**Water Quality-based Effluent Limit**—A limit on the concentration of an effluent parameter that is intended to prevent the concentration of that parameter from exceeding its water quality criterion after it is discharged into a receiving water.

*FACT SHEET FOR STATE WASTE DISCHARGE PERMIT NO. ST 6025*  
*nLight Photonics*

*APPENDIX C—RESPONSE TO COMMENTS*

No comments received.